REMARKS

Reconsideration of the present application is requested in view of the foregoing amendments and the following remarks.

Applicants thank the Examiner for the indication of allowable subject matter in Claim 5. Applicants have carefully considered the Office Action and the cited art, and submit that the present application is in condition for allowance.

Claim Amendment

Claim 1 has been amended to clarify the nature of the candidate cycles. The mesh telecommunications network is indicated to include multiple cycles capable of providing protection paths (see, e.g., paragraph 3 of the disclosure as filed) and the candidate cycles are indicated to comprise a ranked sub-set of the multiple cycles (see, e.g., paragraph 15 of the disclosure as filed).

Claim Rejections

In the Office Action, Claims 1-4, 6-10, and 12-13 were rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Grover U.S. Patent No. 6,421,349 (Grover). Claim 11 was rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over by Grover in view of U.S. Patent Application Pub. No. 2002/0163682 (Su). Applicants respectfully traverse these claim rejections.

In Grover, the distributed pre-configuration of spare capacity occurs after working and spare capacity has been allocated in the network. Although the examiner disagrees, this observation is in fact sufficient to distinguish Claim 1, even prior to the current amendment. Applicants respectfully submit that the parts of Grover cited in the Office Action in support of the Examiner's argument are completely irrelevant to his proposition.

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It is possible that the Examiner's confusion arises from the use of the term "pre-configured" in relation to cycles. In Grover, the term "pre-configured" is used with respect to a pre-configuration in advance of a span failure (as opposed to configuration of a restoration path after a span failure) but it says nothing about the temporal relationship of the distribution of spare capacity for span restoration in relation to allocating spare capacity and working capacity in the network.

Even though the Examiner's understanding of Grover is flawed, applicants have attempted to advance this case by what they perceive to be an unnecessary clarification of the nature of the candidate cycles, namely that they comprise a ranked sub-set of potential cycles in the network. There is nothing in Grover that discloses or suggests ranking a sub-set of potential cycles.

As further clarification, it is noted that Grover describes two different ways (IP-1 and IP-2) to connect the spare capacity in cycles.

In IP-1, the working capacity and spare capacity configuration is a given. See, for example, Col. 8, line 30: "...the network spare capacity is already given, the following formulation optimizes the PC design within the given set of existing spares...," and in general the discussion at Col. 8, line 27 through Col. 9, line 8, where the working links and spare links are taken as fixed. IP-1 finds a connection of spare links that optimizes the configuration of protection cycles.

In IP-2, while the spare capacity is permitted to be determined in the pre-configuration pattern, the working capacity is fixed in the same manner as in IP-2. Hence, in either case, there is no "allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles," as claimed in Claim 1.

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In Grover, a distributed algorithm (DCPC) is also disclosed for finding a set of pre-configured cycles. The Examiner refers to this DCPC algorithm (Col. 11, line 3) as providing allocation of working and spare capacity. However, in the DCPC algorithm, as discussed in some detail at Col. 10, line 66 and following, the working and spare capacity is a given so there is no "allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles," as claimed in Claim 1. Rather, in DCPC, a statelet traverses a network from node to node, acquiring, as it goes, information on the network (e.g., Col. 12, lines 35-55), until it reaches the node (originating node) it started from (Col. 13, lines 22-32), whereupon the information gained by the statelet as it traverses the network, and other statelets arriving at the originating node, is used to establish a restoration path or pre-configured cycle (Col. 13, lines 32-42). The DCPC algorithm thus takes a given set of working links and spare links and finds pre-configured cycles within those existing links. The design is a heuristic and is not optimum (Col. 11, lines 4-9).

In Claim 1 of the present application, the candidate cycles are found first (pre-selecting a set of candidate cycles for forming into pre-configured cycles) and then working capacity and spare capacity is allocated based on those candidate cycles (allocating working paths and spare capacity in the mesh telecommunications network based on the set of candidate cycles). Various methods may be used to select the candidate cycles. In Grover, there is neither pre-selection of candidate cycles, nor allocation of working capacity and spare capacity to those cycles, nor does Grover teach or suggest such an approach.

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CONCLUSION

Applicants submit that the claims in this application are allowable over the prior art. For the reasons discussed above, Claim 1 is patentable over Grover as well as Su. All other claims are in patentable condition, at least for their dependence on Claim 1. Issuance of a notice of allowance at an early date is requested.

Respectfully submitted,

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